Supplemental Table 1: Wilson and Jungner Criteria for Screening (1968) vs UK National Screening Criteria (2003)

Wilson and Jungner criteria for screening	**UK National Screening Committee criteria**
1.The condition to be screened for should be an important health problem 2.There should be an accepted and effective treatment for patients with recognized disease 3. Facilities for diagnosis and treatment of those screened positive should be available 4. The disease should have a recognizable latent or early symptomatic stage 5. There should be a suitable test or examination 6. The test should be acceptable to the population 7. The natural history of the condition, including development from latent to declared disease, should be adequately understood 8. There should be an agreed policy on who should be offered treatment and the appropriate treatment to be offered 9. The programme should be cost-effective 10. Screening should be a continuing process and not a 'once and for all'	**The Condition:** 1. Must be an important health problem 2. The epidemiology and natural history must be understood, and there must be a detectable latent asymptomatic or early symptomatic phase 3. All cost-effective primary prevention interventions should have been implemented where possible **The Test:** 4. Should be simple, safe, and validated 5. The distribution of test values should be known (e.g., sensitivity and specificity), and the criteria for a positive test should be agreed upon 6. Should be acceptable to the population 7. There should be an agreed-upon policy and process for the further referral and diagnostic investigation of individuals who test positive **The Treatment:** 8. Should be an effective treatment or intervention for patients found to have disease and evidence that this early treatment leads to better outcomes 9. Should be evidence-based policies covering which individuals should be offered treatment and the appropriate treatment to be offered 10. Clinical management of the condition and patient outcomes should be optimized **The Screening program:** 11. There must be evidence from randomized clinical trials (RCTs) that the screening program is effective in reducing mortality or morbidity 12. Should be clinically, socially, and ethically acceptable 13. Benefit should outweigh any physical or psychological harm 14. Must be cost effective 15. There must be a clear plan for managing the programme and agreed-upon quality assurance standards 16. There must be adequate staffing and facilities for the program, and for referrals, diagnosis, and treatment 17. All other options for managing the condition should have been considered 18. Evidence-based information explaining the positive and negative aspects of the program must be available to participants 19. Screening intervals, eligibility for screening and the testing process should be scientifically justifiable to the public

Supplemental Table 2. Examples of screening studies related to reported oral cancer screening models.

Screening Model	First Author/Year (Country)
Population screening by home visits vs invitation	Axéll 1976 (Sweden) Warnakulasuriya et al. 1984 (Sri Lanka) Mehta et al. 1986 (India) Warnakulasuriya and Nanayakkara 1991 (Sri Lanka) Jullien et al. 1985(UK) Matthew et al 1997 (India) Sankaranarayanan et al. 2000 (India) Monteiro et al. 2015 (Portugal) Chuang et al. 2017 (Taiwan)
Integrated with medical screening	Dombi et al. 1994 (Hungary) Nagao et al 2000 (Japan)
Opportunistic screening	Fernandez Garrote et al. 1995 (Cuba) Lim et al. 2003 (UK) Chang et al. 2011(Taiwan) Psoter et al. 2019 (US)
High risk screening	Talamini et al 1994 (Italy) Harris et al. 2004 (UK)
Industrial/workplace	Fever 1997 (UK) Nagao et al 2003 (UK) Warnakulasuriya et al. 2010 (India)
Mouth self-examination (MSE)	Scott et al 2010 (UK) Elango et al. 2011 (India) Jornet et al. 2015 (Spain) Viswanath et al. 2013 (US) Chaudhari et al. 2013 (India) Ghani et al. 2019 (Malaysia)

Supplemental Table 3. Cost-effectiveness of oral cancer screening - Studies based on visual oral screening

Author/Year (Country)	Economic evaluation	Comparison	Measures	Results	Conclusion
Community Screening studies- real world data					
Subramanian et al. 2009 (India)	Cost-effectiveness	Screening trial (intervention) vs No screening (control)	Cost per life-year saved by performing intervention	US$ 835 for all individuals US$ 156 for high-risk individuals.	Screening the high-risk population is cost-effective.
Huang et al. 2019 (Taiwan)	Cost-effectiveness	Data from national screening program (intervention) vs Data from cancer registry (control)	Cost per life-year saved by performing intervention	US$ 28,516 for all individuals US$ 5579 for individuals detected up to stage 1.	Screening is cost effective if oral cancer detected up to stage 1, and cost saving if patient detected as an OPMD.
Modelling studies of health economic evaluation					
Speight et al. 2006 (UK)	Cost-utility analysis	7 screening models vs No screening	Cost per life-year saved by performing intervention	£ 18,919 for opportunistic high-risk screening of individuals by a GDP or FP	High-risk opportunistic screening by a GDP or FP may be cost-effective.
Dedhia et al. 2011 (USA)	Markov model	Annual community screening vs No screening	QALYs	Screen cohort gains an average of 0.0151 QALYs	Community-based screening program targeting high-risk males is likely to be cost-effective.
Vokó et al. 2016 (Hungary)	Markov model Cost-utility analysis	2 screening models Vs No screening	QALYs and ICER		High-risk opportunistic screening is more cost-effective than organized screening and no screening.
van der Meij et al. 2002 (Netherlands)	Cost-utility analysis	Screening for oral cancer in OLP patients vs No screening	Cost per life-year saved by performing intervention	US$ 53,400 for all individuals with OLP	Screening for oral cancer in OLP patients seems attractive, if malignant transformation rate is <0.4%/year
Kumdee et al. 2018 (Thailand)	Markov model Cost-utility analysis	Four screening models vs No screening	Cost per life-year saved by performing intervention QALYs	THB 1362 for all screened individuals Screen cohort gains 0.0044 QALYs	Screening in patients >40 was not cost-effective.

Quality-adjusted Life years (QALY); incremental cost-effectiveness ratios (ICER); Equivalent life saved (ELS); General dental practitioner / Family practitioner (GDP / FP). Thai bhat (THB)

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